

IN THE SPECIFICATION

Please make the following amendments to the specification:

[0017] **FIG. 1** (PRIOR ART) shows a resistivity imaging tool suspended in a borehole;
FIG. 2A (PRIOR ART) is a mechanical schematic view of the imaging tool of Fig. 1;
FIG. 2B~~A~~ (PRIOR ART) is a detail view of an electrode pad for the tool of Figs. 1, 2A~~A~~;
FIG. 3 (PRIOR ART) is a pictorial view of a composite imaging log obtained by merging
the resistivity image data shown in acoustic image data;
FIGS. 4A and **4B** illustrate the principal steps of the process of one embodiment of the
invention.
FIG. 5A is a schematic illustration of the distribution of water and hydrocarbons in a
porous reservoir.
FIG. 5B shows the relationship between water saturation and the volume of coarse grain
sand in a porous rock.
FIG. 6A is a plot of resistivity index as a function of water saturation for a bimodal sand
reservoir.
FIG. 6B shows the effect of water saturation on the resistivity anisotropy of a bimodal
sand.
FIG. 7A shows possible solutions for the inversion of measured resistivity of a bimodal
sand reservoir.
FIG. 7B shows the dependency of spherical permeability of a bimodal sand reservoir on
the volume fraction of the coarse grained component.